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DEPARTMENT OF DEFENSE

GENERAL SERVICES ADMINISTRATION

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

48 CFR Parts 1, 2, 7, 11, 23, 25, and 52

**[FAC 2005-88; FAR Case 2014-026; Item I; Docket No. 2014-0026;
Sequence 1]**

RIN 9000-AM87

**Federal Acquisition Regulation: High Global Warming Potential
Hydrofluorocarbons**

AGENCIES: Department of Defense (DoD), General Services Administration (GSA), and National Aeronautics and Space Administration (NASA).

ACTION: Final rule.

SUMMARY: DoD, GSA, and NASA are issuing a final rule amending the Federal Acquisition Regulation (FAR) to implement Executive branch policy in the President's Climate Action Plan to procure, when feasible, alternatives to high global warming potential (GWP) hydrofluorocarbons (HFCs). This final rule will allow agencies to better meet the greenhouse gas emission reduction goals and reporting requirements of the Executive Order on Planning for Sustainability in the Next Decade.

DATES: EFFECTIVE: [Insert date 30 days after date of publication in the FEDERAL REGISTER].

FOR FURTHER INFORMATION CONTACT: Mr. Charles Gray,
Procurement Analyst, at 703-795-6328, for clarification of
content. For information pertaining to status or
publication schedules, contact the Regulatory Secretariat
Division at 202-501-4755. Please cite FAC 2005-88, FAR
Case 2014-026.

SUPPLEMENTARY INFORMATION:

I. Background

DoD, GSA, and NASA published a proposed rule at 80 FR
26883, on May 11, 2015, to implement Executive branch
policy in the President's Climate Action Plan to procure,
when feasible, alternatives to high GWP HFCs. This final
rule will allow agencies to better meet the greenhouse gas
emission reduction goals and reporting requirements of the
Executive Order 13693, Planning for Federal Sustainability
in the Next Decade, of March 25, 2015.

Sixteen respondents submitted comments on the proposed
rule.

II. Discussion and Analysis

The Civilian Agency Acquisition Council and the
Defense Acquisition Regulations Council (the Councils)
reviewed the public comments in the development of the
final rule. A discussion of the comments and the changes

made to the rule as a result of those comments are provided as follows:

A. Summary of significant changes from the proposed rule.

In response to public comments received, the final rule contains the following changes from the proposed rule:

- Clarified the definition of "high global warming potential hydrofluorocarbons" to make it specific to a particular end use.
- Included the use of reclaimed HFCs as products that minimize or eliminate the use, release, or emission of high GWP HFCs.
- Clarified that the clause prescription exception is for supplies that will be delivered outside the United States and its outlying areas as well as for contracts for services performed outside the United States and its outlying areas.
- Added in the clauses at 52.223-20 and 52.223-21 environmental, technical, and economic factors to consider when determining feasibility.

B. Analysis of public comments.

1. General.

a. Support the objectives of the rule.

Comments: Many of the respondents expressed specific support for the objectives of the rule. Several respondents applauded DoD, GSA, and NASA in proposing that Federal agencies procure, when feasible, alternatives to high-GWP HFC refrigerants. Other respondents stated that the proposed rule is a step in the right direction and could have considerable impact on reducing the Government's greenhouse gas emissions and helping Federal agencies and departments meet several Executive actions and orders pertaining to HFCs.

Response: Noted.

b. Oppose the objectives of the rule.

Comment: One respondent believed that global warming is a farce and that the Government should not be allowed to acquire anything because of global warming.

Response: The FAR Council is responsible for the implementation of the Executive orders and policies of the Administration. DoD, NASA, and GSA have prepared this rule to implement and facilitate compliance with Executive Order 13693, Planning for Sustainability in the Next Decade, and the President's Climate Action Plan.

2. Definition of "high global warming potential hydrofluorocarbons."

Various respondents commented on the definition of "high global warming potential hydrofluorocarbons." One of these respondents questioned whether the identification of a lower GWP HFC alternative pursuant to the SNAP program meant that the Government would be required to use the alternative.

Response: The Councils have further clarified in the final rule that the term "high global warming potential hydrofluorocarbons" means any hydrofluorocarbons in a particular end use for which EPA's Significant New Alternatives Policy (SNAP) program has identified other acceptable alternatives that have lower global warming potential. The SNAP list of alternatives is found at 40 CFR part 82, subpart G, with supplemental tables of alternatives available at <http://www.epa.gov/snap>. For every end use, the SNAP program lists include several different alternatives as acceptable for the same end use or application and provides information, including the GWPs of alternatives. The decision as to which of the SNAP-listed acceptable alternatives to select in a particular end use should emphasize the alternative with the lowest GWP that meets the needs of the user.

With regard to the required use of a lower GWP HFC product identified in the SNAP list of alternatives

products, the Government's decision to do so must take into consideration the feasibility of moving on to an alternative. This decision will require the assessment of a number of factors, including lifecycle costs and the overall energy efficiency achieved through the substitution of a lower GWP HFC product.

Comment: One respondent criticized the SNAP program, upon which the proposed definition is based. Among other concerns, the respondent believes that the SNAP program has identified some substitutes that have significant drawbacks, including poor thermal efficiency, flammability issues, processing difficulties, and limited global availability. Similarly, another respondent did not agree that the definition of high GWP HFCs should be created by simple reference to the SNAP program, because other relevant factors need to be considered (see also section 3.d.). Another respondent commented that the term "high global warming potential hydrofluorocarbons" was defined solely in term of relative GWP (compared to alternatives approved under the EPA's SNAP program.) The respondent is concerned that the policies based on this definition fail to take into account other major causes of climate impact.

Response: In response to the concern raised by one respondent regarding significant drawbacks of some

substitutes identified by SNAP, it is helpful to understand the SNAP program's framework for review and listings. EPA applies seven specific criteria for determining whether a substitute is acceptable or unacceptable. These criteria, which can be found at 40 CFR 82.180(a)(7), include atmospheric effects and related health and environmental effects, ecosystem risks, consumer risks, flammability, and cost and availability of the substitute. To enable EPA to assess these criteria, EPA requires submitters to include various information including ozone depletion potential (ODP), GWP, toxicity, flammability, and the potential for human exposure. The SNAP program does not review for a substitute's performance or efficacy. The SNAP list of alternatives evolves as new substitutes become available and substitutes that pose significantly greater risk than other available substitutes are determined to no longer be acceptable for use. These changes occur because of the changing availability of substitutes for a specific use as well as EPA's overall understanding of the environmental and human health impacts of substitutes already listed as compared with new substitutes. However, as changes are made to the SNAP lists, EPA assures users that multiple substitutes are available for any given end use and that end users continue to have options.

In its recent final rule, published at 80 FR 42869, on July 20, 2015, EPA modified the listings for certain HFCs and HFC blends in various end uses in the aerosols, foam blowing, and refrigeration and air conditioning sectors where other alternatives were available or potentially available that posed lower overall risk to human health and the environment. Pursuant to the guiding principles of the SNAP program, the action did not specify that any HFCs are unacceptable across all sectors and end uses. Consistent with section 612 of the Clean Air Act (42 U.S.C. 7671k) as EPA has historically interpreted it under the SNAP program, EPA made the modifications based on evaluation of the substitutes addressed in that action using the SNAP criteria for evaluation and considering the current suite of other available and potentially available substitutes.

For the refrigerant and foam blowing agent end uses, equipment design is critical. Thus, there is a range of thermal conductivity and insulation values among the acceptable alternatives, with some having lower values than the HFCs previously used (as well as ozone-depleting substances (ODS)) some having higher values, and others having comparable values. In EPA's recent rulemaking published at 80 FR 42869, on July 20, 2015, EPA noted that no information provided to EPA suggests that the

alternatives that remain acceptable result in lower energy efficiency. In fact, as stated in the preamble to the rule, available information indicates that the opposite can be true, that the acceptable alternatives not subject to a status change have been used in equipment or used to produce insulating foam that provide for better energy efficiency.

In response to the respondent who disagreed that the definition of high GWP HFCs should refer just to the SNAP program, the Councils note that the definition does not bind the end user to select any specific alternative or to ignore assessment of the unique needs that end user may be facing. Rather, requiring activities can use the information provided by the SNAP list of alternatives, including information on the GWP of alternatives, in addition to other factors, in the selection of products and equipment that best meet their needs. Please see related response below regarding comments on the feasibility of moving to alternatives.

In response to the respondent who commented that the term "high global warming potential hydrofluorocarbons" was defined solely in terms of relative GWP (compared to other alternatives approved under the EPA's SNAP program) and was concerned that this failed to take into account other major

causes of climate impact, the term is intended to reflect differences in GWP. This is consistent with how climate impacts are considered under the SNAP program (See section VII.A.3., GWP Considerations, in the preamble to the recent EPA SNAP final rule published at 80 FR 42870 at 42937, on July 20, 2015). Users may take into account additional factors, such as energy efficiency, in deciding which of the lower-GWP alternatives listed as acceptable under SNAP meet their needs. For clarification, please also see the response below that discusses other factors such as energy efficiency, which are related to the performance of the equipment, whereas GWP relates to the intrinsic characteristic and potential environmental impact of the chemical itself.

3. Policy.

a. Lower vs. lowest/climate-friendly.

Comment: One respondent, primarily addressing refrigerants, recommended addition of the following definitions to the rule:

“Climate-friendly” alternative means an alternative that is listed as acceptable under the EPA’s SNAP program (40 CFR part 82, subpart G) that has a GWP of less than 150.

"Lowest GWP alternative" means an alternative that is identified as acceptable under the EPA's SNAP program and has the lowest GWP compared to all other acceptable alternatives for the relevant end use and has a GWP under 150 for new equipment and a GWP at least 50 percent lower than the current refrigerant for retrofits.

The respondent further recommended a policy that would avoid procurement of mid-range GWP alternatives (from 300 to 1500 GWP) if truly low GWP alternatives have been proven and commercialized, because use of mid-range alternatives would set up a circumstance where a future phase-out in just a few years will be necessary to remove these mid-range GWP alternatives due to their impact on the climate. Consistent with the definition recommended by the respondent, the respondent also recommended that the Government should not purchase any new equipment or product unless it has a refrigerant with a GWP of less than 150 and for retrofits, higher GWP refrigerants can be used if they have GWPs of at least 50 percent less than the current refrigerant that will be replaced. Otherwise, the respondent recommended that the old system should be decommissioned and replaced.

Response: While GWP is an important criterion, it should not be the sole criterion for consideration. The

EPA SNAP program conducts comparative risk analyses for each end use and alternative, and has not set specific GWP limits for acceptable alternatives in a specific end use. For example, while an alternative refrigerant in one application might have a GWP that meets the respondent's proposed GWP limit of 150, there may be other human health or environmental considerations for the particular end use or application (e.g., toxicity limits, flammability) that may lead the user to determine that another alternative is more suitable for that particular application. For this reason and others, Federal agency requiring activities and contractors need the flexibility to be able to evaluate the entire suite of lower GWP alternatives and to balance direct climate impacts, energy efficiency, safety, performance, and other user needs before selecting the one most appropriate for their specific use.

b. Timing.

Various respondents commented on the timing of when the FAR rule should take effect.

Comment: Several respondents recommended that the enactment of this rule should be tied to the HFC conversion timelines within the EPA SNAP rule published at 80 FR 42870, on July 20, 2015, and that this rule is imposing use of lower GWP alternatives "earlier than required." Unless

otherwise noted, all references to a SNAP rule in this document are in reference to the final rule published at 80 FR 42870, on July 20, 2015. According to one of the respondents, the SNAP final rule specified that use of HFC-134a would be unacceptable for use in polystyrene extruded boardstock and billet as of January 1, 2021.

Response: It is not the intent of this rule to require conversion to alternatives on earlier timelines than in the SNAP final rule. Rather, as stated in the background section of the proposed FAR rule, the purpose of this final rule is to facilitate the purchase of cleaner alternatives to HFCs whenever feasible and transition over time to equipment that uses safer and more sustainable alternatives.

Comment: A respondent also recommended coordinating with Department of Energy rulemaking on energy efficiency and conservation standards. Companies are working to comply with these stringent new standards.

Response: The Councils are aware of the Department of Energy (DOE) rulemaking titled, "Energy Efficiency Standards for New Federal Commercial and Multi-Family High-Rise Residential Buildings' Baseline Standards Update", published at 80 FR 68749, on November 6, 2015, and have taken the DOE rules into account in drafting this final

rule. The rule requires reduction in the use, release, and emissions of high GWP HFCs only when feasible. The clauses state that a determination of feasibility would include consideration of energy efficiency.

Comment: One respondent noted that there is a great range of speeds by which the sectors, and the companies within them, who use HFCs, can transition into lower GWP alternatives. Another respondent stated that a transition to low GWP blowing agents must be conducted over a timeline that allows individual manufacturers to identify suitable alternatives and conduct necessary product development and testing to fully commercialize new formulations. Another respondent recommended modifying the clause at FAR 52.223-12(c)(1) to require transitioning "at the earliest feasible time" from high GWP HFCs to acceptable alternatives.

Response: The President's Climate Action Plan specifically directs agencies to purchase cleaner alternatives to HFCs whenever feasible and transition over time to equipment that uses safer and more sustainable alternatives. The language used in the Climate Action Plan: (1) recognizes that there are technical hurdles that must be overcome to identify suitable alternatives, conduct necessary product development and testing, and fully commercialize new formulations; and (2) envisions a

transition "over time." Accordingly, this final rule allows existing Government equipment to be utilized until the end of its useful life, thus minimizing stranded capital.

c. Acceptability and feasibility.

Comments: More than half of the respondents commented on the need to consider factors other than low GWP value in determining the acceptability and/or feasibility of using a lower GWP alternative. According to many respondents, lower GWP alternatives must be both environmentally and economically acceptable. One respondent stated that considering only the GWP of a compound may not be appropriate, depending on the circumstances of a particular use. This respondent also stated that GWP alone is an insufficient measure of a product's impact on human health and the environment. A few respondents stated the need for a definition of "feasible." They noted that without a definition, contractors will have little guidance as to when adoption of low GWP substances would be appropriate and/or required and the rule will have little impact on procurement decisions.

i. Life cycle/energy efficiency.

Many of the respondents recommended consideration of the total life-cycle of an alternative product, such as in-use emission rates and energy efficiency benefits.

- With regard to refrigerants, a respondent commented that the majority of the climate impact from refrigerant used results from the energy consumed by the air conditioning system (i.e., the indirect impact) and not from the GWP of the refrigerant itself (i.e., the direct climate impact). According to the respondent, refrigerant selection has a substantial impact on the energy efficiency of the air conditioning system in which the refrigerant will be used.

- With regard to foam insulation, a respondent commented on the importance of the use of thermal insulation for increased energy efficiency to reduce global warming. Likewise, another respondent pointed out the need to consider the life-cycle benefits of products, because if less energy efficient insulation products are used in the construction of a building the result may be increased greenhouse gas emissions over the life of the building or facility.

ii. Safety-flammability.

Several respondents commented on the need to consider key product attributes that affect safety, such as flammability. Another respondent mentioned that feasible

alternatives should consider standards and codes compliance (such as safety standards).

iii. Technical capability.

Several respondents commented on the necessity to consider technical capability of the proposed alternative to avoid inadvertently selecting a product that will prove to be less energy efficient.

iv. Commercial availability.

Several respondents commented on the need for alternatives to be commercially available. One respondent recommended that absence of commercially available alternatives should constitute a viable exemption from the provisions of the rule. One respondent recommended that decisions on feasibility of low GWP alternatives need to be assessed based on available technologies.

v. Cost.

Several respondents mentioned cost as another factor for consideration. One respondent asked whether the taxpayer should be forced to pay more than the general public, by adopting lower GWP products earlier than required.

vi. Definition.

One of the respondents recommended defining "feasibility" as "a commercially available alternative with

a GWP lower than that of the currently used substance in the relevant application, that (1) is identified by EPA as an acceptable alternative under 40 CFR part 82, which increases the total cost of the installation or bid by not more than 10 percent more than would be the cost if high GWP substances were used."

Response: The concerns raised by the respondents in paragraphs 3.c.i. through vi. of this analysis of the public comments are issues considered by EPA in making listing decisions under the SNAP program. Section 612 of the Clean Air Act provides that EPA must prohibit the use of a substitute where EPA has determined that there are other available substitutes that pose less overall risk to human health and the environment for that use. EPA reviews substitutes using a comparative risk framework and GWP is only one of several criteria EPA considers in its overall evaluation. EPA also considers factors such as ozone depletion potential, exposure assessments, flammability, toxicity, and other environmental impacts. In addition, in the recent change of status rule in which EPA changed the status of a number of high GWP substitutes from acceptable to unacceptable, EPA considered the technical challenges of a transition and the supply of other alternatives in establishing the transition date. As the term is used in

this rule, "feasible" means not only capable of being accomplished, but capable of being accomplished successfully and suitably. All of the factors mentioned by respondents are relevant in the decision as to which acceptable alternative is preferable in a given application. Alternatives that have been determined acceptable by EPA under the SNAP Program should still be evaluated in each particular application in terms of environmental, technical, and economic feasibility. The FAR Council does not have a basis (such as statute or Executive Order) upon which to establish a specific cost differential that would constitute an unreasonable cost. An assessment of whether a cost is unreasonable depends partly on the benefits to be derived from use of the alternative and other economic factors. Therefore, the final rule does not define the term "feasibility," but provides direction to the Federal user and contractor in terms of factors to be considered when determining the feasibility of using an acceptable lower GWP alternative (FAR 52.223-20, Aerosols, and 52.223-21, Foams).

d. Refrigerant management.

Comment: Many of the respondents commented on the need for better refrigerant management, including the recovery, reclamation, and reuse of refrigerant.

- Leaks and accidental or intentional venting of refrigerant. As stated by one respondent, refrigeration and air conditioning systems are prone to leaks during normal operations. Even with aggressive leak detection, these appliances and systems require servicing to maintain the proper refrigerant charge and performance. Another respondent emphasized that air conditioning and refrigeration systems are actually non-emissive uses of HFCs since these are closed systems. The concern with HFCs, therefore, is not the use, but the misuse. According to the respondent, the vast amount of HFC emissions result from leaks and accidental or intentional venting of refrigerant.

- Increase the use of reclaimed refrigerants. According to one respondent, nearly all lost refrigerant is replaced with newly produced virgin refrigerant. Another respondent recommended that the benefits of the proposed rule could be significantly enhanced by defining acceptable low GWP alternatives to include reclaimed refrigerants. Rather than wait for low GWP alternatives to be deployed in retrofitted or newly installed equipment, the Federal Government can significantly reduce greenhouse gas emissions in the near-term by including reclaimed HFC refrigerant as part of the procurement priorities. Another respondent recommended that the Government should give preference to the use of reclaimed refrigerant to service existing Federal buildings and facilities, just like the Federal Government promotes recycled paper and other consumer goods.

- Improved refrigerant management. As stated by a respondent, a Federal program promoting reclaimed refrigerant will encourage better refrigerant management practices in the private sector, because companies will recognize that their used refrigerant has an economic value. Another respondent noted that the policy would provide incentive for recovery of HFC refrigerant from older end-of-life equipment (currently only approximately 10 percent is recovered and reclaimed).

- Less production of virgin HFC refrigerants. One respondent stated that the goal should be to limit production of all virgin refrigerants, including lower GWP HFCs. As stated by another respondent, use of reclaimed refrigerant displaces additional production of new HFC refrigerant, thereby preventing greenhouse gas emissions that would otherwise occur.

Response: The Councils recognize that refrigerant management is an important way to reduce climate-damaging and ozone-depleting emissions from equipment used for air-conditioning and refrigeration. While the existing EPA regulations prohibit any person from knowingly venting, releasing, or disposing into the environment any ozone-depleting or HFC refrigerant in the course of maintaining, servicing, repairing, or disposing of air-conditioning or refrigeration appliances, they do not establish requirements to repair leaks or specify other servicing

requirements for equipment containing HFCs. EPA has recently proposed updating the existing refrigerant management requirements under section 608 of the Clean Air Act and extending them to cover servicing practices for HFCs (see 80 FR 69457, dated November 9, 2015).

There are also environmental benefits to promoting the use of reclaimed material over virgin production. Both newly-produced and reclaimed refrigerants must meet the same purity requirements and thus reclaimed refrigerant can be used instead of newly produced refrigerants. This final rule provides use of reclaimed HFCs as an example of sustainable acquisition under FAR 11.002(d)(1) and encourages their use at FAR clause 52.223-12(c)(4).

4. Exceptions.

a. Outside the United States.

Various respondents commented on the exception in the proposed rule for contracts that will be performed outside the United States and its outlying areas.

Comment: One respondent requested clarification of what “performed outside the United States and its outlying areas” means for the acquisition of supplies. Another respondent stated that the rule should apply to both domestic and foreign procurement decisions, because limiting the scope to domestic acquisitions misses an

opportunity to further reduce greenhouse gas emissions. Other respondents stated that an effective means of reducing the future climate change contribution of HFCs must be global in nature. One respondent recommended that that application to contracts outside to United States and its outlying areas should be excepted only if proven to be unfeasible.

Response: The clause prescription at FAR 23.804 has been clarified by specifying that the exception to use of the clause is for contracts for supplies to be delivered outside the United States and its outlying areas, or contracts for services to be performed outside the United States and its outlying areas. This rule only applies to contracts for supplies to be delivered within the United States or its outlying areas or to services to be performed within the United States or its outlying areas.

b. Military and space activities.

Comment: One respondent asked whether DoD, GSA, and NASA would be prohibited from taking advantage of the SNAP exemptions provided for military and space activities.

Response: Nothing in this rule precludes Federal agencies from taking advantage of the exemptions to the SNAP requirements, as currently provided in the SNAP final rule for military and space-and aeronautics-related

applications. However, this rule, unlike the SNAP Program, requires transitioning in advance of the SNAP deadlines, only when feasible. Therefore, an exception for military and space activities is unnecessary. In accordance with the overall construction of the rule, exemptions for military and space activities would fall under the general exemption as infeasible.

In addition, the FAR clauses state that a contractor shall transition to lower GWP alternatives "unless otherwise specified in the contract." In those cases where a Federal agency has critical uses where only qualified high GWP HFCs may be used, these would be specified in a contract and unqualified lower GWP alternatives would not be allowed.

c. Low temperature refrigeration systems.

Comment: One respondent recommended an exemption for low temperature refrigeration systems operating below -50°C. The respondent stated that in both the EU and Canada, similar low GWP initiatives have allowed such an exemption. According to the respondent, due to issues of flammability, energy efficiency, and technical capability, the respondent does not know of any low GWP solutions that meet the needs of ultra-low temperature refrigeration systems.

Response: There is no need for a special exemption for a low temperature refrigeration system. The concept of feasibility is addressed and an exemption arises if use of lower GWP alternatives is found to be infeasible. If low GWP alternatives do not meet the needs of ultra-low temperature refrigeration systems, then transition is not feasible and, therefore, not required by this rule.

5. Other.

a. Labeling.

Comment: One respondent recommended that contractors should also be required to label products which contain or are manufactured with HFCs.

Response: The labeling requirement for products that contain or are manufactured with Ozone-Depleting Substances (ODS) at paragraph (b) of FAR clause 52.223-11, Ozone-Depleting Substances and High Global Warming Potential Hydrofluorocarbons, is required by statute (42 U.S.C. 7671j) and EPA regulations (40 CFR part 82, subpart E). There is not a comparable requirement for high GWP HFCs.

b. Buildings with multiple systems.

Comment: With regard to the reporting requirement in FAR 52.223-12(d), the respondent recommended changing "50 or more pounds" to "25 or more pounds" and that a building containing multiple systems that each contain individually

less than 25 pounds of HFCs or refrigerant blends containing HFCs should be assessed as the entire building's refrigerant use and not on an individual system level.

Response: When drafting the proposed rule, the 50-pound threshold was chosen in order to eliminate tracking and reporting on thousands of pieces of smaller equipment, thereby minimizing administrative burden and costs to contractors, including many small businesses; and also recognizing that larger systems such as building chillers, commissary/large commercial refrigeration systems, and industrial process refrigeration systems likely contribute the largest percentage of total HFC emissions. This 50-pound threshold is also consistent with other existing regulatory requirements for refrigerants imposed under the Clean Air Act and 40 CFR part 82. Recognizing that EPA has proposed (see 80 FR 69457, dated November 9, 2015) updating and expanding the coverage of the refrigerant management requirements established under section 608 of the Clean Air Act, if those requirements are amended, they would be applicable to the public and private sectors.

c. Foreign acquisition.

Comment: One respondent recommended that the rule should clarify that if certain products identified as acceptable under the EPA SNAP program are available in

other markets but not available or not available at commercial levels in the U.S., then the products may be acquired under the nonavailability exception to the Buy American statute (see FAR 25.103).

Response: FAR part 25, Foreign Acquisition, addresses domestic source restrictions, including the Buy American Act. However, not all acquisitions are subject to the Buy American Act (e.g., when the acquisition is covered by the World Trade Organization Government Procurement Agreement). Other domestic source restrictions may also apply, and there are sanctions against purchases from certain countries. FAR part 23 must be read in conjunction with FAR part 25.

d. Ozone-depleting substances.

Comment: One respondent is concerned that the proposed clause at FAR 52.223-12, Maintenance, Service, Repair, Recycling, or Disposal of Refrigeration Equipment and Air Conditioners, does not include ODS within its scope.

Response: This rule is not intended to suggest that users revert to an ODS in lieu of a high-GWP HFC. The language in the rule leaves the current ODS regulatory language, currently at FAR subpart 23.8, in place and only adds language dealing with high GWP HFCs. The definition

of "ozone-depleting substance" as any substance designated by the EPA in 40 CFR part 82 also remains in FAR part 2. The language also maintains the current FAR 23.803(a)(2) preference to the procurement of substances that reduce overall risks to human health and the environment by the depletion of ozone in the upper atmosphere.

e. Specific refrigerants, foams, and aerosols.

Comments: Several respondents commented on specific refrigerants, foams, or aerosols and lower GWP alternatives.

- One respondent sent information on a low GWP substitute for HFC-134a.

- One respondent included a list of some examples of available low GWP replacements for high GWP HFCs by application (i.e., refrigerants, foam, and aerosols).

- Another respondent was concerned that the rule does not require an alternative to the most commonly used refrigerant, HCFC-22, which is both an ODS and has a high GWP, because it is determined to be acceptable by EPA under SNAP.

Response: The information on the low GWP alternatives is noted. While the revised FAR subpart 23.8 makes no explicit mention of HCFC-22, or any other specific substance, the regulation refers to EPA's SNAP program for

the list of acceptable alternatives. HCFC-22 remains acceptable as a refrigerant under SNAP. However, existing regulations effectively prohibit the use of virgin HCFC-22 to manufacture a new appliance or retrofit an existing appliance (see 40 CFR 82.15(g)(2)). This restriction does not affect the use of used, recovered, and recycled HCFC-22. Regulations also effectively prohibit the manufacture or import of appliances and appliance components that are pre-charged with HCFC-22 (see 40 CFR 82.304).

Comment: One respondent recommended an additional clause to address clean agent fire suppression.

Response: The suggested clause is outside the scope of this case and could not be included in the final rule without publishing for public comment.

III. Applicability

This rule will apply to all acquisitions inside the United States and its outlying areas of products or services containing or using high GWP HFCs, including—

- Acquisitions that do not exceed the simplified acquisition threshold; and
- Commercial items (including commercially available off-the-shelf items) that use FAR part 12 procedures.

A majority of the acquisitions involving high GWP HFCs do not exceed the simplified acquisition threshold.

Applicability of the requirements below the simplified acquisition threshold is necessary to be effective and to cover a significant number of actions and dollars that fall below this threshold. However, the reporting requirement applies only for delivery of, or maintenance, service, repair and disposal of, equipment or appliances normally containing 50 pounds or more of HFCs or refrigerant blends containing HFCs.

Likewise, a majority of the acquisitions involving high GWP HFCs involve the acquisition of commercial items. Applicability of the requirements to commercial items is necessary to be effective and include a significant number of actions and dollars for commercial item acquisitions.

IV. Executive Orders 12866 and 13563

Executive Orders (E.O.s) 12866 and 13563 direct agencies to assess all costs and benefits of available regulatory alternatives and, if regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety effects, distributive impacts, and equity). E.O. 13563 emphasizes the importance of quantifying both costs and benefits, of reducing costs, of harmonizing rules, and of promoting flexibility. This is a significant regulatory action and, therefore, was subject to review

under Section 6(b) of E.O. 12866, Regulatory Planning and Review, dated September 30, 1993. This rule is not a major rule under 5 U.S.C. 804.

V. Regulatory Flexibility Act

DoD, GSA, and NASA have prepared a Final Regulatory Flexibility Analysis (FRFA) consistent with the Regulatory Flexibility Act, 5 U.S.C. 601, et seq. The FRFA is summarized as follows:

This rule is necessary to implement Executive branch policy stated in the President's Climate Action Plan. The objective of this rule is to require Federal agencies to procure climate-friendly chemical alternatives to high global warming potential (GWP) hydrofluorocarbons (HFCs) and allow agencies to better meet the greenhouse gas emission reduction goals and reporting requirements of Executive Order 13693, Planning for Sustainability in the Next Decade.

There were no issues raised by the public comments in response to the initial regulatory flexibility analysis.

Based on FPDS data for Fiscal Year 2015, this rule will apply to approximately 1400 small business contractors that provide certain supplies (including equipment and appliances) that contain HFCs to the Federal Government and about 347 small business contractors that provide maintenance, service, repair, or disposal of refrigeration equipment or air conditioners. In addition, although the clauses at 52.223-20, Aerosols, and 52.223-21, Foams, do not contain any reporting requirements, these clauses also apply respectively to solicitations and contracts that involve repair or maintenance of electronic or mechanical devices and construction of buildings and facilities.

DoD, GSA, and NASA estimate an average reporting burden of about 8 hours per year for each small business providing supplies that contain high GWP HFCs or maintenance, repair, or disposal of refrigeration equipment or air conditioners.

DoD, GSA, and NASA did not identify any significant alternatives to the rule that would accomplish the stated objectives of the President's Climate Action Plan and the Executive Order.

It is necessary for the rule to apply to small entities, because about three-quarters of the affected contractors are small businesses and excluding them would minimize the importance of this policy and may prevent the Government from meeting the objective of this policy. Every effort has been made to minimize the burdens imposed. For example, this rule only requires tracking and reporting on equipment that normally contain 50 or more pounds of HFCs. In addition, this rule does not impose a labeling requirement for products that contain or are manufactured with HFCs, unlike the labeling requirement that is required by statute for ozone-depleting substances.

Interested parties may obtain a copy of the FRFA from the Regulatory Secretariat Division. The Regulatory Secretariat Division has submitted a copy of the FRFA to the Chief Counsel for Advocacy of the Small Business Administration.

VI. Paperwork Reduction Act

The Paperwork Reduction Act (44 U.S.C. Chapter 35) applies. The rule contains information collection requirements. OMB has cleared this information collection requirement under OMB Control Number 9000-0191, titled: "High Global Warming Potential Hydrofluorocarbons."

List of Subjects in 48 CFR Parts 1, 2, 7, 11, 23, 25, and 52

Government procurement.

Dated: May 5, 2016.

William Clark,
Director,
Office of Government-wide

Acquisition Policy,
Office of Acquisition Policy,
Office of Government-wide Policy.

Therefore, DoD, GSA and NASA amend 48 CFR parts 1, 2, 7, 11, 23, 25, and 52 as set forth below:

1. The authority citation for 48 CFR parts 1, 2, 7, 11, 23, 25, and 52 continues to read as follows:

Authority: 40 U.S.C. 121(c); 10 U.S.C. chapter 137; and 51 U.S.C. 20113.

PART 1—FEDERAL ACQUISITION REGULATIONS SYSTEM

1.106 [Amended]

2. Amend section 1.106 by adding to the table, in numerical order, FAR segments "52.223-11" and "52.223-12" with their corresponding OMB control number "9000-0191".

PART 2—DEFINITIONS OF WORDS AND TERMS

3. Amend section 2.101 in paragraph (b) (2) by adding, in alphabetical order, the definitions "Global warming potential", "High global warming potential hydrofluorocarbons", "Hydrofluorocarbons", "Manufactured end product", and "Products" to read as follows:

2.101 Definitions.

* * * * *

(b) * * *

(2) * * *

Global warming potential means how much a given mass of a chemical contributes to global warming over a given time period compared to the same mass of carbon dioxide.

Carbon dioxide's global warming potential is defined as 1.0.

* * * * *

High global warming potential hydrofluorocarbons means any hydrofluorocarbons in a particular end use for which EPA's Significant New Alternatives Policy (SNAP) program has identified other acceptable alternatives that have lower global warming potential. The SNAP list of alternatives is found at 40 CFR part 82, subpart G, with supplemental tables of alternatives available at <http://www.epa.gov/snap/>).

* * * * *

Hydrofluorocarbons means compounds that contain only hydrogen, fluorine, and carbon.

* * * * *

Manufactured end product means any end product in product and service codes (PSC) 1000-9999, except—

- (1) PSC 5510, Lumber and Related Basic Wood Materials;
- (2) Product or service group (PSG) 87, Agricultural Supplies;
- (3) PSG 88, Live Animals;
- (4) PSG 89, Subsistence;
- (5) PSC 9410, Crude Grades of Plant Materials;

(6) PSC 9430, Miscellaneous Crude Animal Products,
Inedible;

(7) PSC 9440, Miscellaneous Crude Agricultural and
Forestry Products;

(8) PSC 9610, Ores;

(9) PSC 9620, Minerals, Natural and Synthetic; and

(10) PSC 9630, Additive Metal Materials.

* * * * *

Products has the same meaning as supplies.

* * * * *

PART 7—ACQUISITION PLANNING

4. Amend section 7.103 by revising paragraph (p) (2)
to read as follows:

7.103 Agency-head responsibilities.

* * * * *

(p) * * *

(2) Comply with the policy in 11.002(d) regarding
procurement of biobased products, products containing
recovered materials, environmentally preferable products
and services (including Electronic Product Environmental
Assessment Tool (EPEAT®)-registered electronic products,
nontoxic or low-toxic alternatives), ENERGY STAR® and
Federal Energy Management Program-designated products,
renewable energy, water-efficient products, non-ozone-

depleting products, and products and services that minimize or eliminate, when feasible, the use, release, or emission of high global warming potential hydrofluorocarbons, such as by using reclaimed instead of virgin hydrofluorocarbons;

* * * * *

PART 11—DESCRIBING AGENCY NEEDS

5. Amend section 11.002 by revising paragraph (d) (1) (vi) to read as follows:

11.002 Policy.

* * * * *

(d) (1) * * *

(vi) Non-ozone-depleting substances, and products and services that minimize or eliminate, when feasible, the use, release, or emission of high global warming potential hydrofluorocarbons, such as by using reclaimed instead of virgin hydrofluorocarbons (subpart 23.8) .

* * * * *

PART 23—ENVIRONMENT, ENERGY AND WATER EFFICIENCY, RENEWABLE ENERGY TECHNOLOGIES, OCCUPATIONAL SAFETY, AND DRUG-FREE WORKPLACE

6. Amend section 23.000 by revising paragraph (d) to read as follows:

23.000 Scope.

* * * * *

(d) Acquiring energy-efficient and water-efficient products and services, environmentally preferable (including EPEAT®-registered, and non-toxic and less toxic) products, products containing recovered materials, biobased products, non-ozone-depleting products, and products and services that minimize or eliminate, when feasible, the use, release, or emission of high global warming potential hydrofluorocarbons, such as by using reclaimed instead of virgin hydrofluorocarbons;

* * * * *

7. Revise the heading of subpart 23.8 to read as follows:

**SUBPART 23.8—OZONE-DEPLETING SUBSTANCES AND
HYDROFLUOROCARBONS**

8. Revise section 23.800 to read as follows:

23.800 Scope of subpart.

This subpart sets forth policies and procedures for the acquisition of items that—

(a) Contain, use, or are manufactured with ozone-depleting substances; or

(b) Contain or use high global warming potential hydrofluorocarbons.

9. Revise section 23.801 to read as follows:

23.801 Authorities.

(a) Title VI of the Clean Air Act (42 U.S.C. 7671, et seq.).

(b) Section 706 of division D, title VII of the Omnibus Appropriations Act, 2009 (Pub. L. 111-8).

(c) Executive Order 13693 of March 25, 2015, Planning for Federal Sustainability in the Next Decade.

(d) Environmental Protection Agency (EPA) regulations, Protection of Stratospheric Ozone (40 CFR part 82).

23.802 [Removed]

10. Remove section 23.802.

23.803 [Redesignated as 23.802 and Amended]

11. Redesignate section 23.803 as 23.802 and revise newly redesignated 23.802 to read as follows:

23.802 Policy.

It is the policy of the Federal Government that Federal agencies—

(a) Implement cost-effective programs to minimize the procurement of materials and substances that contribute to the depletion of stratospheric ozone and/or result in the use, release or emission of high global warming potential hydrofluorocarbons; and

(b) Give preference to the procurement of acceptable alternative chemicals, products, and manufacturing processes that reduce overall risks to human health and the environment by minimizing—

(1) The depletion of ozone in the upper atmosphere;
and

(2) The potential use, release, or emission of high global warming potential hydrofluorocarbons.

12. Add new section 23.803 to read as follows:

23.803 Procedures.

In preparing specifications and purchase descriptions, and in the acquisition of products and services, agencies shall—

(a) Comply with the requirements of title VI of the Clean Air Act, section 706 of division D, title VII of Pub. L. 111-8, Executive Order 13693, and 40 CFR 82.84(a)(2), (3), (4), and (5);

(b) Substitute acceptable alternatives to ozone-depleting substances, as identified under 42 U.S.C. 7671k, to the maximum extent practicable, as provided in 40 CFR 82.84(a)(1), except in the case of Class I substances being used for specified essential uses, as identified under 40 CFR 82.4(n);

(c) Unless a particular contract requires otherwise, specify that, when feasible, contractors shall use another acceptable alternative in lieu of a high global warming potential hydrofluorocarbon in products and services in a particular end use for which EPA's Significant New Alternatives Policy (SNAP) program has identified other acceptable alternatives that have lower global warming potential; and

(d) Refer to EPA's SNAP program for the list of alternatives, found at 40 CFR part 82, subpart G, as well as supplemental tables of alternatives (available at <http://www.epa.gov/snap>).

13. Revise section 23.804 to read as follows:

23.804 Contract clauses.

Except for contracts for supplies that will be delivered outside the United States and its outlying areas, or contracts for services that will be performed outside the United States and its outlying areas, insert the following clauses:

(a) 52.223-11, Ozone-Depleting Substances and High Global Warming Potential Hydrofluorocarbons, in solicitations and contracts for—

(1) Refrigeration equipment (in product or service code (PSC) 4110);

- (2) Air conditioning equipment (PSC 4120);
 - (3) Clean agent fire suppression systems/equipment (e.g., installed room flooding systems, portable fire extinguishers, aircraft/tactical vehicle fire/explosion suppression systems) (in PSC 4210);
 - (4) Bulk refrigerants and fire suppressants (in PSC 6830);
 - (5) Solvents, dusters, freezing compounds, mold release agents, and any other miscellaneous chemical specialty that may contain ozone-depleting substances or high global warming potential hydrofluorocarbons (in PSC 6850);
 - (6) Corrosion prevention compounds, foam sealants, aerosol mold release agents, and any other preservative or sealing compound that may contain ozone-depleting substances or high global warming potential hydrofluorocarbons (in PSC 8030);
 - (7) Fluorocarbon lubricants (primarily aerosols) (in PSC 9150); and
 - (8) Any other manufactured end products that may contain or be manufactured with ozone-depleting substances.
- (b) 52.223-12, Maintenance, Service, Repair, or Disposal of Refrigeration Equipment and Air Conditioners,

in solicitations and contracts that include the maintenance, service, repair, or disposal of—

(1) Refrigeration equipment, such as refrigerators, chillers, or freezers; or

(2) Air conditioners, including air conditioning systems in motor vehicles.

(c) 52.223-20, Aerosols, in solicitations and contracts—

(1) For products that may contain high global warming potential hydrofluorocarbons as a propellant, or as a solvent; or

(2) That involve maintenance or repair of electronic or mechanical devices.

(d) 52.223-21, Foams, in solicitations and contracts for—

(1) Products that may contain high global warming potential hydrofluorocarbons or refrigerant blends containing hydrofluorocarbons as a foam blowing agent, such as building foam insulation or appliance foam insulation; or

(2) Construction of buildings or facilities.

PART 25—FOREIGN ACQUISITION

25.1101 [Amended]

14. Amend section 25.1101 by removing from paragraph (f) “, as defined in the provision at 52.225-18”.

PART 52—SOLICITATION PROVISIONS AND CONTRACT CLAUSES

15. Amend section 52.212-5 by—

a. Revising the date of the clause; and

b. In paragraph (b)—

i. Redesignating paragraphs (b)(36) through (54) as paragraphs (b)(38) through (56), respectively;

ii. Adding new paragraphs (b)(36) and (37);

iii. Further redesignating newly redesignated paragraphs (b)(43) through (56) as paragraphs (b)(45) through (58), respectively; and

iv. Adding new paragraphs (b)(43) and (44).

The revision and additions reads as follows:

52.212-5 Contract Terms and Conditions Required To Implement Statutes or Executive Orders—Commercial Items.

* * * * *

CONTRACT TERMS AND CONDITIONS REQUIRED TO IMPLEMENT STATUTES OR EXECUTIVE ORDERS—COMMERCIAL ITEMS ([INSERT ABBREVIATED MONTH AND YEAR 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER])

* * * * *

(b) * * *

_____(36) 52.223-11, Ozone-Depleting Substances and High Global Warming Potential Hydrofluorocarbons ([INSERT ABBREVIATED MONTH AND YEAR 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]) (E.O. 13693).

____ (37) 52.223-12, Maintenance, Service, Repair, or Disposal of Refrigeration Equipment and Air Conditioners ([INSERT ABBREVIATED MONTH AND YEAR 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]) (E.O. 13693).

* * * * *

____ (43) 52.223-20, Aerosols ([INSERT ABBREVIATED MONTH AND YEAR 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]) (E.O. 13693).

____ (44) 52.223-21, Foams ([INSERT ABBREVIATED MONTH AND YEAR 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]) (E.O. 13693).

* * * * *

16. Amend section 52.213-4 by—

a. Revising the date of the clause; and

b. In paragraph (b) (1)—

i. Redesignating paragraphs (b) (1) (xi) through (xvi) as (b) (1) (xiii) through (xviii), respectively;

ii. Adding new paragraphs (b) (1) (xi) and (xii);

iii. Further redesignating newly redesignated paragraphs (b) (1) (xiv) through (xviii) as paragraphs (b) (1) (xvi) through (xx), respectively; and

iv. Adding new paragraphs (b) (1) (xiv) and (xv).

The revision and additions read as follows:

**52.213-4 Terms and Conditions—Simplified Acquisitions
(Other Than Commercial Items).**

* * * * *

TERMS AND CONDITIONS—SIMPLIFIED ACQUISITIONS (OTHER THAN COMMERCIAL
ITEMS) ([**INSERT ABBREVIATED MONTH AND YEAR 30 DAYS AFTER DATE OF
PUBLICATION IN THE FEDERAL REGISTER**])

* * * *

(b) * * *

(1) * * *

(xi) 52.223-11, Ozone-Depleting Substances and High Global Warming Potential Hydrofluorocarbons ([**INSERT ABBREVIATED MONTH AND YEAR 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**]) (E.O. 13693) (applies to contracts for products as prescribed at FAR 23.804(a)).

(xii) 52.223-12, Maintenance, Service, Repair, or Disposal of Refrigeration Equipment and Air Conditioners ([**INSERT ABBREVIATED MONTH AND YEAR 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**]) (E.O. 13693) (Applies to maintenance, service, repair, or disposal of refrigeration equipment and air conditioners).

* * * *

(xiv) 52.223-20, Aerosols ([**INSERT ABBREVIATED MONTH AND YEAR 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**]) (E.O. 13693) (Applies to contracts for products that may contain high global warming potential hydrofluorocarbons as a propellant or as a solvent; or contracts for maintenance or repair of electronic or mechanical devices).

(xv) 52.223-21, Foams ([**INSERT ABBREVIATED MONTH AND YEAR 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**]) (E.O. 13693) (Applies to contracts for products that may contain high global warming potential hydrofluorocarbons or refrigerant blends containing hydrofluorocarbons as a foam blowing agent; or contracts for construction of buildings or facilities).

* * * *

17. Amend section 52.223-11 by revising the section heading, clause heading, and clause to read as follows:

**52.223-11 Ozone-Depleting Substances and High Global
Warming Potential Hydrofluorocarbons.**

* * * * *

OZONE-DEPLETING SUBSTANCES AND HIGH GLOBAL WARMING POTENTIAL
HYDROFLUOROCARBONS ([INSERT ABBREVIATED MONTH AND YEAR 30 DAYS AFTER DATE
OF PUBLICATION IN THE FEDERAL REGISTER])

(a) Definitions. As used in this clause—

Global warming potential means how much a given mass of a chemical contributes to global warming over a given time period compared to the same mass of carbon dioxide. Carbon dioxide's global warming potential is defined as 1.0.

High global warming potential hydrofluorocarbons means any hydrofluorocarbons in a particular end use for which EPA's Significant New Alternatives Policy (SNAP) program has identified other acceptable alternatives that have lower global warming potential. The SNAP list of alternatives is found at 40 CFR part 82, subpart G, with supplemental tables of alternatives available at (<http://www.epa.gov/snap/>).

Hydrofluorocarbons means compounds that only contain hydrogen, fluorine, and carbon.

Ozone-depleting substance means any substance the Environmental Protection Agency designates in 40 CFR part 82 as—

(1) Class I, including, but not limited to, chlorofluorocarbons, halons, carbon tetrachloride, and methyl chloroform; or

(2) Class II, including, but not limited to, hydrochlorofluorocarbons.

(b) The Contractor shall label products that contain or are manufactured with ozone-depleting substances in the manner and to the extent required by 42 U.S.C. 7671j (b), (c), (d), and (e) and 40 CFR part 82, subpart E, as follows:

Warning: Contains (or manufactured with, if applicable)
* _____, a substance(s) which harm(s) public health and
environment by destroying ozone in the upper atmosphere.

* The Contractor shall insert the name of the
substance(s).

(c) Reporting. For equipment and appliances that
normally each contain 50 or more pounds of
hydrofluorocarbons or refrigerant blends containing
hydrofluorocarbons, the Contractor shall—

(1) Track on an annual basis, between October 1
and September 30, the amount in pounds of
hydrofluorocarbons or refrigerant blends containing
hydrofluorocarbons contained in the equipment and
appliances delivered to the Government under this contract
by—

(i) Type of hydrofluorocarbon (e.g., HFC-134a,
HFC-125, R-410A, R-404A, etc.);

(ii) Contract number; and

(iii) Equipment/appliance;

(2) Report that information to the Contracting
Officer for FY16 and to www.sam.gov, for FY17 and after—

(i) Annually by November 30 of each year during
contract performance; and

(ii) At the end of contract performance.

(d) The Contractor shall refer to EPA's SNAP program
(available at <http://www.epa.gov/snap>) to identify
alternatives. The SNAP list of alternatives is found at 40
CFR part 82, subpart G, with supplemental tables available
at <http://www.epa.gov/snap>.

(End of clause)

18. Amend section 52.223-12 by revising the section
heading, clause heading, and clause to read as follows:

52.223-12 Maintenance, Service, Repair, or Disposal of Refrigeration Equipment and Air Conditioners.

* * * * *

MAINTENANCE, SERVICE, REPAIR, OR DISPOSAL OF REFRIGERATION EQUIPMENT AND AIR CONDITIONERS ([INSERT ABBREVIATED MONTH AND YEAR 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER])

(a) Definitions. As used in this clause—

Global warming potential means how much a given mass of a chemical contributes to global warming over a given time period compared to the same mass of carbon dioxide. Carbon dioxide's global warming potential is defined as 1.0.

High global warming potential hydrofluorocarbons means any hydrofluorocarbons in a particular end use for which EPA's Significant New Alternatives Policy (SNAP) program has identified other acceptable alternatives that have lower global warming potential. The SNAP list of alternatives is found at 40 CFR part 82, subpart G, with supplemental tables of alternatives available at (<http://www.epa.gov/snap/>).

Hydrofluorocarbons means compounds that contain only hydrogen, fluorine, and carbon.

(b) The Contractor shall comply with the applicable requirements of sections 608 and 609 of the Clean Air Act (42 U.S.C. 7671g and 7671h) as each or both apply to this contract.

(c) Unless otherwise specified in the contract, the Contractor shall reduce the use, release, or emissions of high global warming potential hydrofluorocarbons under this contract by—

(1) Transitioning over time to the use of another acceptable alternative in lieu of high global warming potential hydrofluorocarbons in a particular end use for which EPA's SNAP program has identified other acceptable alternatives that have lower global warming potential.

(2) Preventing and repairing refrigerant leaks through service and maintenance during contract performance;

(3) Implementing recovery, recycling, and responsible disposal programs that avoid release or emissions during equipment service and as the equipment reaches the end of its useful life; and

(4) Using reclaimed hydrofluorocarbons, where feasible.

(d) For equipment and appliances that normally each contain 50 or more pounds of hydrofluorocarbons or refrigerant blends containing hydrofluorocarbons, that will be maintained, serviced, repaired, or disposed under this contract, the Contractor shall—

(1) Track on an annual basis, between October 1 and September 30, the amount in pounds of hydrofluorocarbons or refrigerant blends containing hydrofluorocarbons added or taken out of equipment or appliances under this contract by—

(i) Type of hydrofluorocarbon (e.g., HFC-134a, HFC-125, R-410A, R-404A, etc.);

(ii) Contract number;

(iii) Equipment/appliance; and

(2) Report that information to the Contracting Officer for FY16 and to www.sam.gov, for FY17 and after—

(i) No later than November 30 of each year during contract performance; and

(ii) At the end of contract performance.

(e) The Contractor shall refer to EPA's SNAP program to identify alternatives. The SNAP list of alternatives is found at 40 CFR part 82, subpart G, with supplemental tables available at <http://www.epa.gov/snap/>.

(End of clause)

19. Add section 52.223-20 to read as follows:

52.223-20 Aerosols.

As prescribed in 23.804(c), insert the following clause:

AEROSOLS ([INSERT ABBREVIATED MONTH AND YEAR 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER])

(a) Definitions. As used in this clause—

Global warming potential means how much a given mass of a chemical contributes to global warming over a given time period compared to the same mass of carbon dioxide. Carbon dioxide's global warming potential is defined as 1.0.

High global warming potential hydrofluorocarbons means any hydrofluorocarbons in a particular end use for which EPA's Significant New Alternatives Policy (SNAP) program has identified other acceptable alternatives that have lower global warming potential. The SNAP list of alternatives is found at 40 CFR part 82, subpart G, with supplemental tables of alternatives available at <http://www.epa.gov/snap/>).

Hydrofluorocarbons means compounds that contain only hydrogen, fluorine, and carbon.

(b) Unless otherwise specified in the contract, the Contractor shall reduce its use, release, or emissions of high global warming potential hydrofluorocarbons, when feasible, from aerosol propellants or solvents under this contract. When determining feasibility of using a particular alternative, the Contractor shall consider environmental, technical, and economic factors such as—

- (1) In-use emission rates, energy efficiency;
- (2) Safety, such as flammability or toxicity;
- (3) Ability to meet technical performance requirements; and
- (4) Commercial availability at a reasonable cost.

(c) The Contractor shall refer to EPA's SNAP program to identify alternatives. The SNAP list of alternatives is

found at 40 CFR part 82, subpart G, with supplemental tables available at <http://www.epa.gov/snap/>.

(End of clause)

20. Add section 52.223-21 to read as follows:

52.223-21 Foams.

As prescribed in 23.804(d), insert the following clause:

FOAMS ([**INSERT ABBREVIATED MONTH AND YEAR 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**])

(a) Definitions. As used in this clause—

Global warming potential means how much a given mass of a chemical contributes to global warming over a given time period compared to the same mass of carbon dioxide. Carbon dioxide's global warming potential is defined as 1.0.

High global warming potential hydrofluorocarbons means any hydrofluorocarbons in a particular end use for which EPA's Significant New Alternatives Policy (SNAP) program has identified other acceptable alternatives that have lower global warming potential. The SNAP list of alternatives is found at 40 CFR part 82, subpart G, with supplemental tables of alternatives available at <http://www.epa.gov/snap/>.

Hydrofluorocarbons means compounds that contain only hydrogen, fluorine, and carbon.

(b) Unless otherwise specified in the contract, the Contractor shall reduce its use, release, and emissions of high global warming potential hydrofluorocarbons and refrigerant blends containing hydrofluorocarbons, when feasible, from foam blowing agents, under this contract. When determining feasibility of using a particular alternative, the Contractor shall consider environmental, technical, and economic factors such as—

(1) In-use emission rates, energy efficiency, and safety;

- (2) Ability to meet performance requirements; and
- (3) Commercial availability at a reasonable cost.

(c) The Contractor shall refer to EPA's SNAP program to identify alternatives. The SNAP list of alternatives is found at 40 CFR part 82, subpart G, with supplemental tables available at <http://www.epa.gov/snap/>.

(End of clause)

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